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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,768	03/07/2002	George Coline Stove	164748(8830-26)	2717

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EXAMINER
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GREGORY, BERNARR E

ART UNIT	PAPER NUMBER
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3662

DATE MAILED: 05/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/070,768	STOVE, GEORGE COLINE	
	<b>Examiner</b>	Art Unit	
	Bernarr E. Gregory	3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_ .

2a) This action is FINAL.                  2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-62 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) 19-54 is/are allowed.

6) Claim(s) 1,9,16-18 and 55-62 is/are rejected.

7) Claim(s) 2-8 and 10-15 is/are objected to.

8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_ .  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3,6</u> .	6) <input type="checkbox"/> Other: _____

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1. The Specification is objected to under 37 CFR 1.71 in that the disclosure fails to teach adequately how to make and to use the invention and in that the Specification does not have the proper section headings.

Claim 62 is a single means claim in that it is presented to claim a "radar system," but only sets forth "data processing means" in the claim. Please see MPEP 2164.08(a).

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC (See 37 CFR 1.52(e)(5) and MPEP 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text are permitted to be submitted on compact discs.) or  
REFERENCE TO A "MICROFICHE APPENDIX" (See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.)
- (e) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (f) BRIEF SUMMARY OF THE INVENTION.
- (g) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (h) DETAILED DESCRIPTION OF THE INVENTION.
- (i) CLAIM OR CLAIMS (commencing on a separate sheet).
- (j) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (k) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a

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nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 62 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Please see the remarks with the objection to the specification in section 1 above.

4. Claims 19-54 are allowable over the prior art of record.

5. Claims 9 and 55-62 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Throughout claims 55-59, the use of "broad band" is indefinite and unclear in context in that the use does not agree with the disclosure of conventional pulse radar with a PRF. Baseband is not disclosed.

Throughout claims 55-62, the uses of "energy-frequency signature"; "energy frequency signatures"; and of "energy-frequency spectrum" are indefinite and unclear in context.

Claim 60 is indefinite and unclear in that method steps in claims may not refer to other claims. A claim may only refer to another claim as a dependent claim.

Claims 61-62 are indefinite and unclear in context in that a claim may only refer to another claim in the alternative. Please see 37 CFR 1.75(c).

Claim 62 is indefinite and unclear in context in that it is a single-means claim. Please see MPEP 2164.08(a).

Claim 9 is indefinite and unclear due to the use of the stray comma at the beginning of claim 1 of claim 9.

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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7. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Smith ('097) or Kanamauru et al..

With respect to independent claim 1, in Figure 5 of Kanamauru et al please note that the casing is tubular, the tubular casing is inherently radar reflective, there is an open aperture at one end of the tube and a radar reflector at the other end of the tube. The interior portion of the tubular casing is met by the dielectric air being in the tube. Essentially the same rejection is made with respect to Figures 2, 4, and 6 of Smith.

8. Claims 1 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kroeger et al or the Vlahacos et al article.

The limitations of claim 1 are fully met by the coaxial line probe in Figure 1 of the Vlahacos et al article. Please note that the conductor of the probe is surrounded by dielectric insulation and that the claimed "aperture" corresponds to the open end of the cable (i.e., the lower portion of the coaxial line in Figure 1 of the Vlahacos et al article. The conductor in the coaxial cable is the claimed "antenna element."

In Figure 2 of Kroeger et al ('773), please note that the spacer (60) is disclosed at a dielectric at column 5, lines 51-68 of the reference. Also, please note column 6, lines 42-59 of Kroeger et al ('773) states that the "two conductive regions of the sample cell should be separated from each other by a dielectric substance." As for the further limitations of dependent claim 17, please note that column 6, lines 55-59 state that a solid dielectric such as Teflon could be used.

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9. Claims 1 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Phillips et al ('908).

In Figure 9 of Phillips et al ('908), please note that item 9 is a dielectric, that the antenna is tubular, and that item 18 is an "antenna element." Inherently the dielectric in Phillips et al ('908) would be solid as claimed in dependent claim 17.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kroeger et al ('773).

It would have been obvious to one or ordinary skill-in-the-art that the dielectric in Kroeger et al ('773) could be any well-known type of dielectric, including a liquid or a packed powder.

12. Claims 2-8 and 10-15 are objected to a depending from a rejected claim.
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chang and So are of general interest.

Heger ('603); Heger ('102); and Heger ('799) are of interest but have cross-sections that are not tubular.

Peele et al ('431) is of interest, but it does not appear to use signatures.

DeTeso is of interest, but the casing is not radar reflective.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernarr E. Gregory whose telephone number is (703) 306-5765. The examiner can normally be reached on weekdays from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza, can be reached on (703) 306-4171. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



Bernarr E. Gregory  
Primary Examiner  
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